

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in the application.

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
5. (Canceled).
6. (Canceled).
7. (Canceled).
8. (Original) A method using a magnetic field to orient with respect to an article surface a plurality of non-spherical particles each including a major dimension and each of which can be moved by a force applied to each particle, the particles being of a material which will react with a magnetic field, the particles being disposed in a fluid medium which will not react to a magnetic field and the viscosity of which can be increased, comprising the steps of:
 - providing substantially parallel relative movement between the magnetic field, and each particle and the article surface in respect to which each particle is disposed, while
 - disposing the magnetic field with its direction relative to the article surface so that, during the relative movement, the magnetic field will locate an average of at least about 50% of the major dimensions in a position generally along the article surface in respect to which each particle is disposed, as each particle passes through the magnetic field; and
 - increasing the viscosity of the medium to secure each particle in the position.
9. (Original) The method of claim 8 in which:

the magnetic field is provided by disposing a magnet with a centerline of its N-S poles within about 30° of perpendicular to the article surface over which it is disposed and spaced apart from the particles at a distance, the magnet extending the magnetic field around the particles to apply to the particles a torque force capable of moving the particles in the fluid medium; and

with the magnet maintained substantially at the distance, providing the relative movement between the magnet and the particles.

10. (Original) The method of claim 9 in which:

the article surface is non-planar; and,

the magnet is carried at the distance as the relative movement between the magnet and the article surface substantially follows the non-planar article surface.

11. (Original) The method of claim 10 for providing a coating on a complex, three dimensional non-planar surface of a component of a power generating apparatus in which:

the magnetic field is in the range of about 100-1000 oersted;

the distance is in the range of about ¼-1.5";

the particles are metallic, magnetic particles having an aspect ratio in the range of about 10-100; and,

the fluid medium includes a curable polymeric material.

12. (Original) The method of claim 11 in which the magnetic flakes are a ferromagnetic material having an aspect ratio in the range of about 15-30.

13. (Original) A method for orienting with respect to an article surface a plurality of non-spherical particles each including a major dimension and each of which can be moved by a force applied to each particle, comprising the steps of:

disposing the particles in a fluid medium the viscosity of which can be increased;

applying a force to the medium carrying the particles to flow the medium substantially parallel to the article surface,

the medium applying a force on the particles sufficient to locate an average of at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed; and, increasing the viscosity of the medium to secure each particle in the position.

14. (Canceled).

15. (Canceled).

16. (Original) A method for orienting with respect to an article surface a plurality of non-spherical particles each including a major dimension and each of which can be moved by a force applied to each particle, comprising the steps of:

disposing the particles in a medium the viscosity of which can be increased, the medium being a fluid condition;

disposing the medium with the particles on the article surface;

locating the article surface substantially perpendicular to a force of gravity;

maintaining the medium in the fluid condition for a time selected to enable the force of gravity to locate an average of at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed; and,

increasing the viscosity of the medium to secure each particle in the position.

17. (Original) A method for orienting with respect to an article surface a plurality of non-spherical particles each including a major dimension and each of which can be moved by a force applied to each particle, comprising the steps of:

disposing the particles in a medium the viscosity of which can be increased;

the medium being in a fluid condition with the viscosity selected to provide a selected surface tension in the medium;

disposing the medium with the particles on the article surface; and

maintaining the medium in the fluid condition for a time selected to enable the surface tension to located at least about 50% of the plurality of particles with the major dimension in a position generally along the article surface in respect to which each particle is disposed.

18. (Original) The method of claim 17 in which:
- the medium with the particles is disposed in a coating of a plurality of superimposed layers on an article surface,
- each layer being maintained in the fluid condition for the time prior to disposition of a subsequent superimposed layer to enable a combination of gravity and surface tension to locate at least about 60% of the plurality of particles in the coating with the major dimension in the position.
19. (Original) The method of claim 18 in which each layer has a thickness in the range of about 0.008-0.012".